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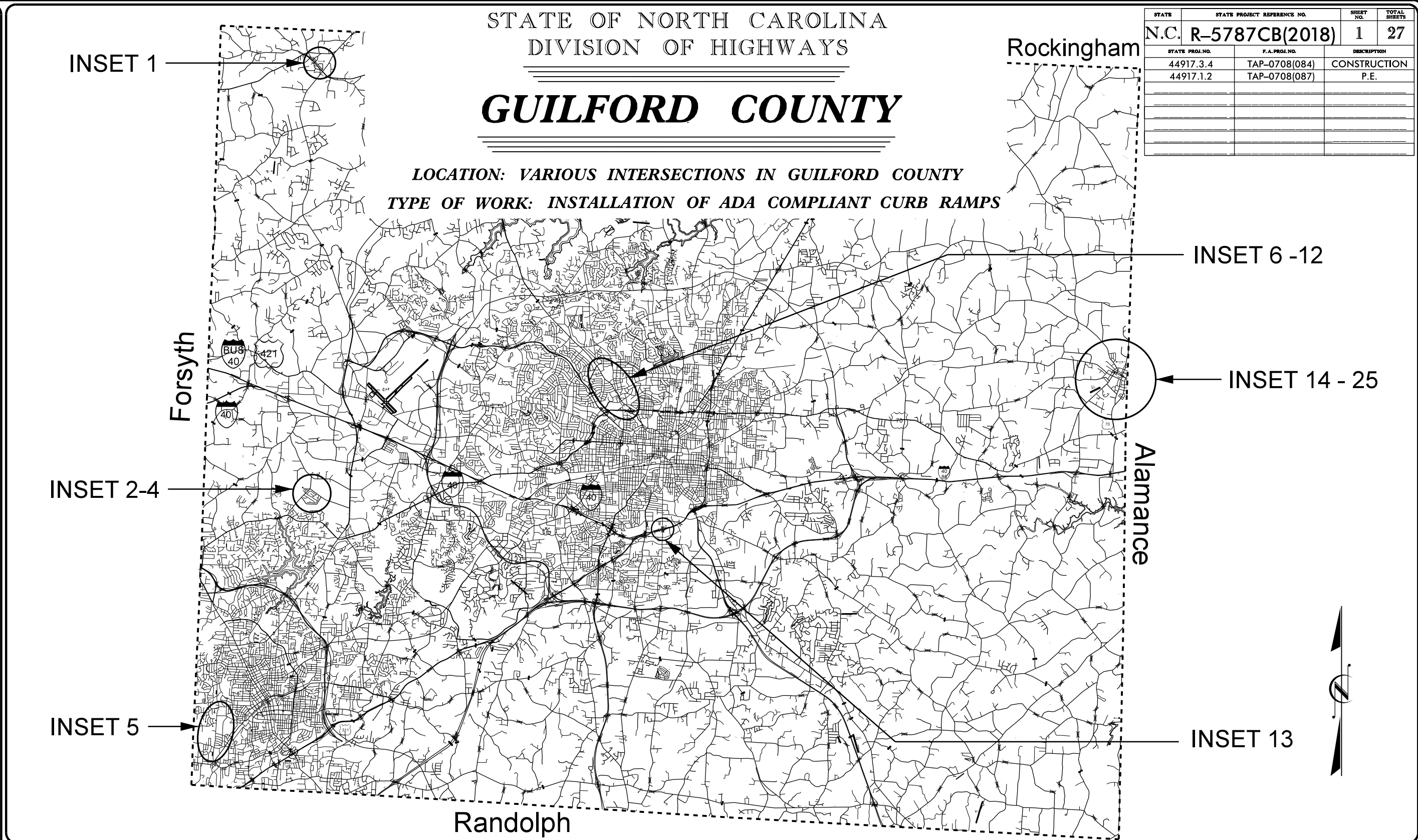
TIP PROJECT: R-5787CB

CONTRACT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: VARIOUS INTERSECTIONS IN GUILFORD COUNTY
TYPE OF WORK: INSTALLATION OF ADA COMPLIANT CURB RAMPS



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5787CB(2018)	1	27
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44917.3.4	TAP-0708(084)	CONSTRUCTION	
44917.1.2	TAP-0708(087)	P.E.	

PROJECT LENGTH	Prepared In the Office of: DIVISION OF HIGHWAYS 1584 Yanceyville St., Greensboro, NC, 27405		HYDRAULICS ENGINEER		
	2018 STANDARD SPECIFICATIONS	J. C. Reimakoski PROJECT ENGINEER		SIGNATURE: _____ P.E.	
	RIGHT OF WAY DATE: Not Applicable	Nishant Shah PROJECT DESIGN ENGINEER		ROADWAY DESIGN ENGINEER	
	LETTING DATE: June 21, 2018			SIGNATURE: _____ P.E.	



- REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.d



Diagram illustrating the components and dimensions of a Type 2 ramp:

- 2**: Sidewalk Area
- 1**: Ramp Surface
- 3**: Detectable Warning Surface (see Standard 848.05)
- 6" x 12" CONCRETE CURB**: Concrete curb along the edge of the ramp.
- 2'-6" CURB AND GUTTER**: Curb and gutter at the base of the ramp.
- LANDING WIDTH 5' MIN**: Minimum landing width at the bottom of the ramp.
- NON-WALK SURFACE**: Surface adjacent to the ramp.
- SIDEWALK WIDTH 5' MIN**: Minimum sidewalk width at the bottom of the ramp.

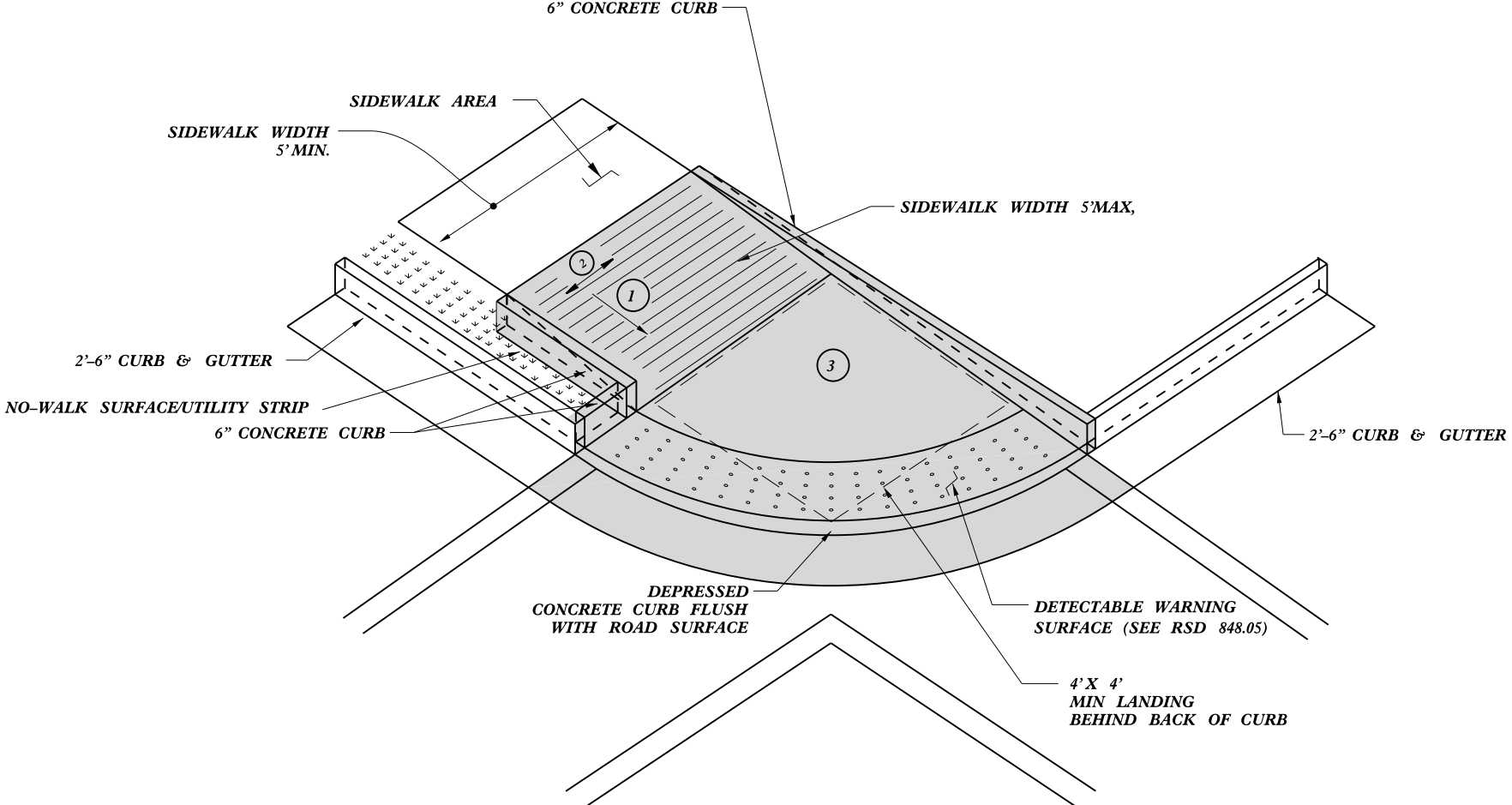
TYPE 2

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

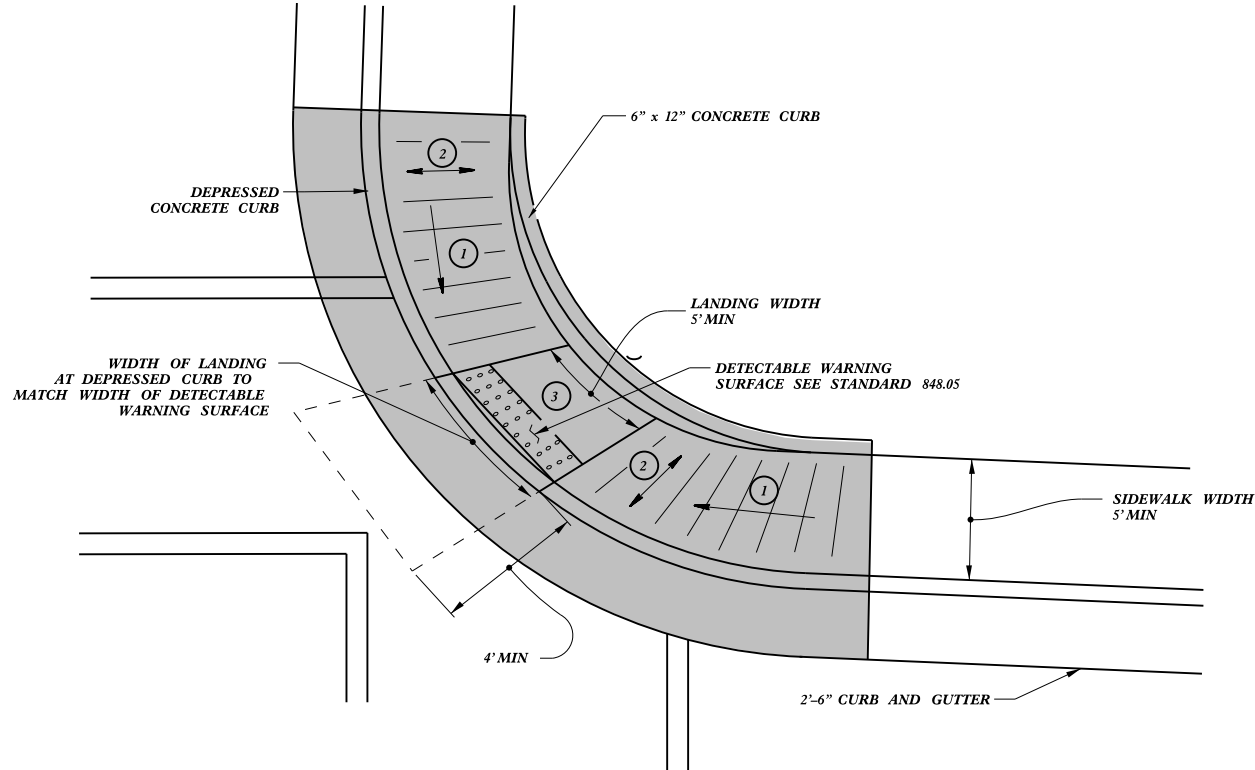


**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

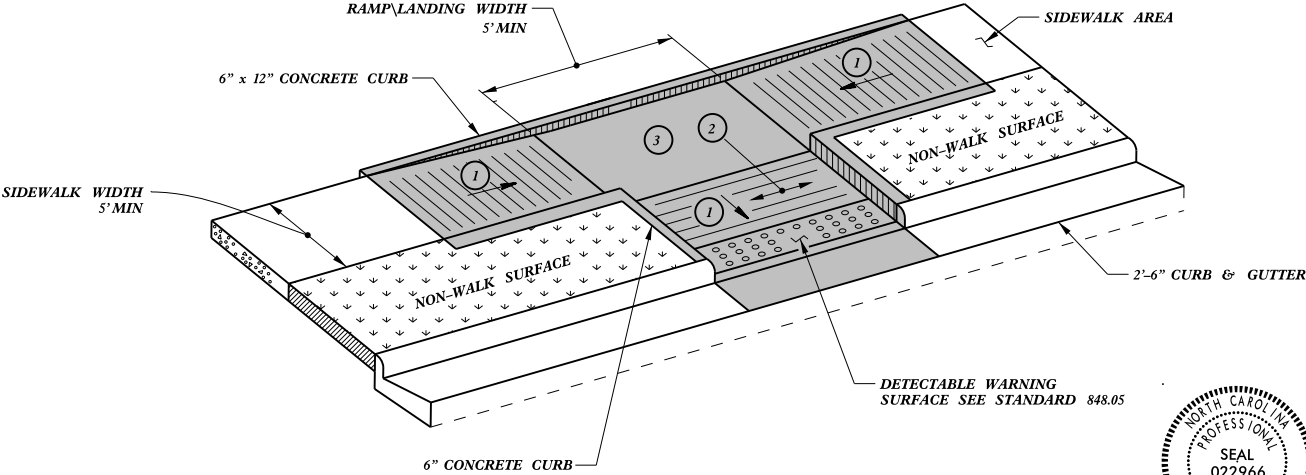
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
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FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn



TYPE 2A MOD



TYPE 2B



TYPE 3

DocuSigned by:
J. S. Howerton
5/18/2018

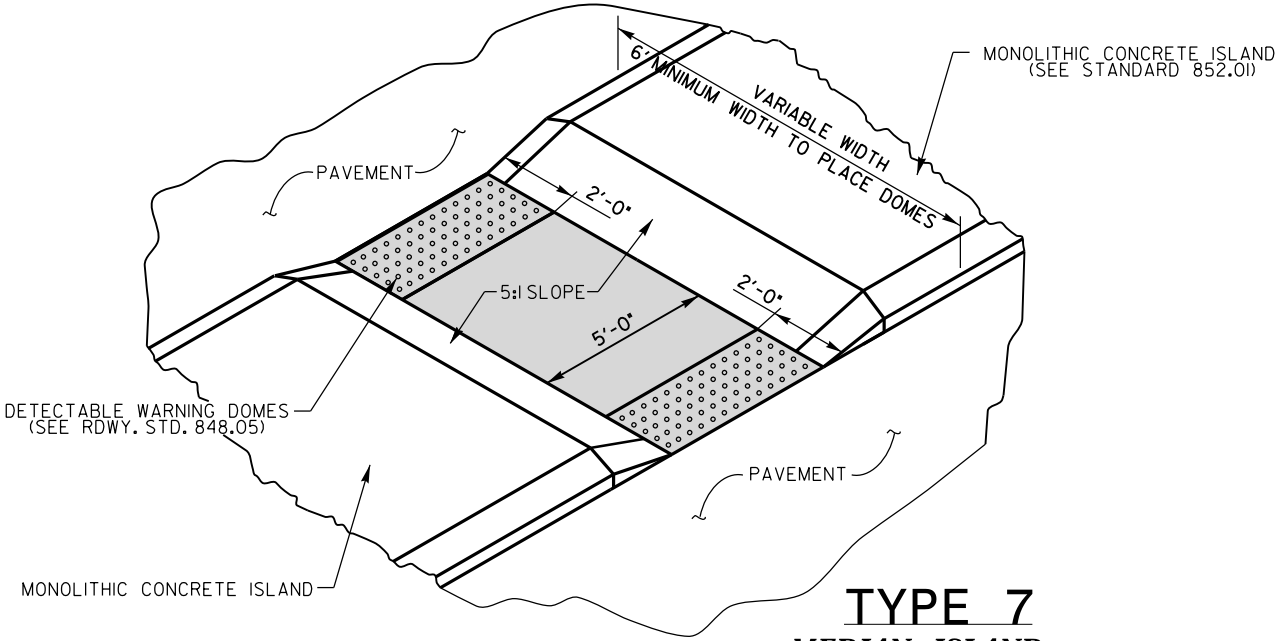


CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-6950 FAX 919-250-4119	
CURB RAMPS	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn	

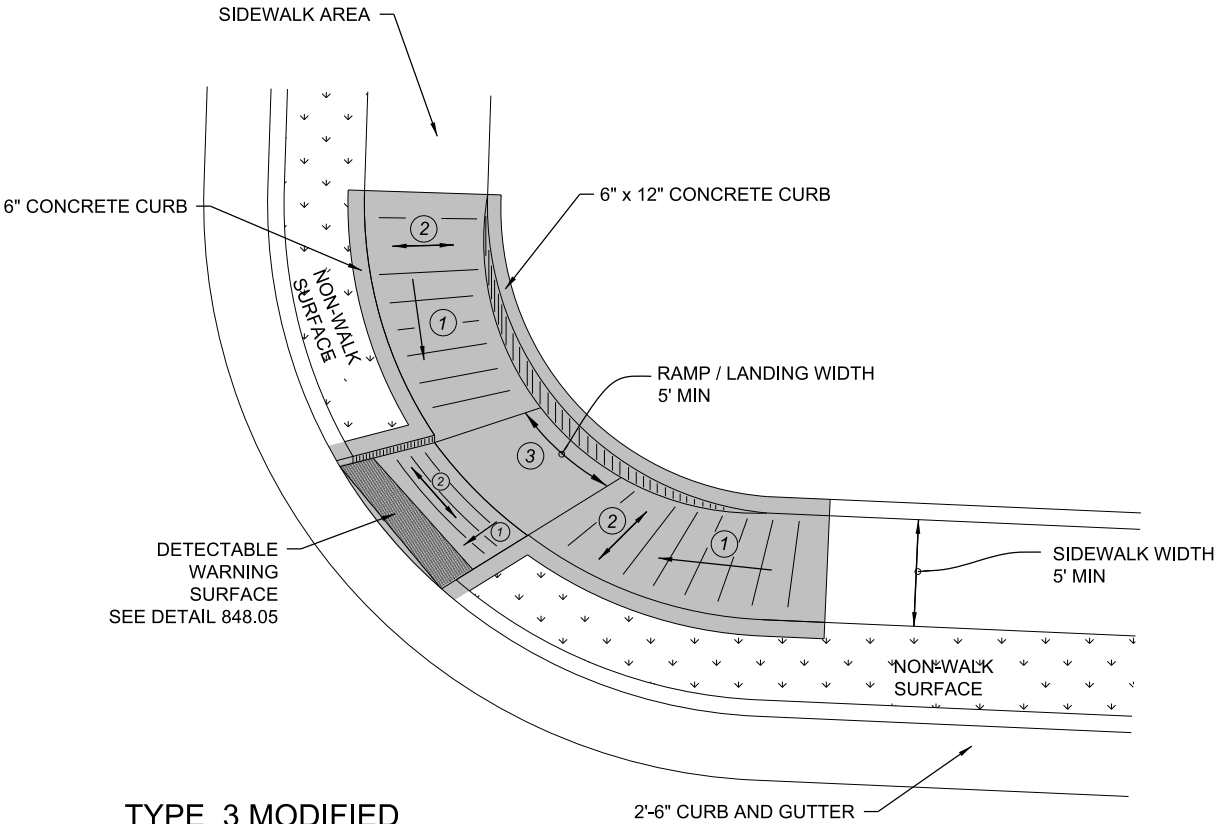
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES



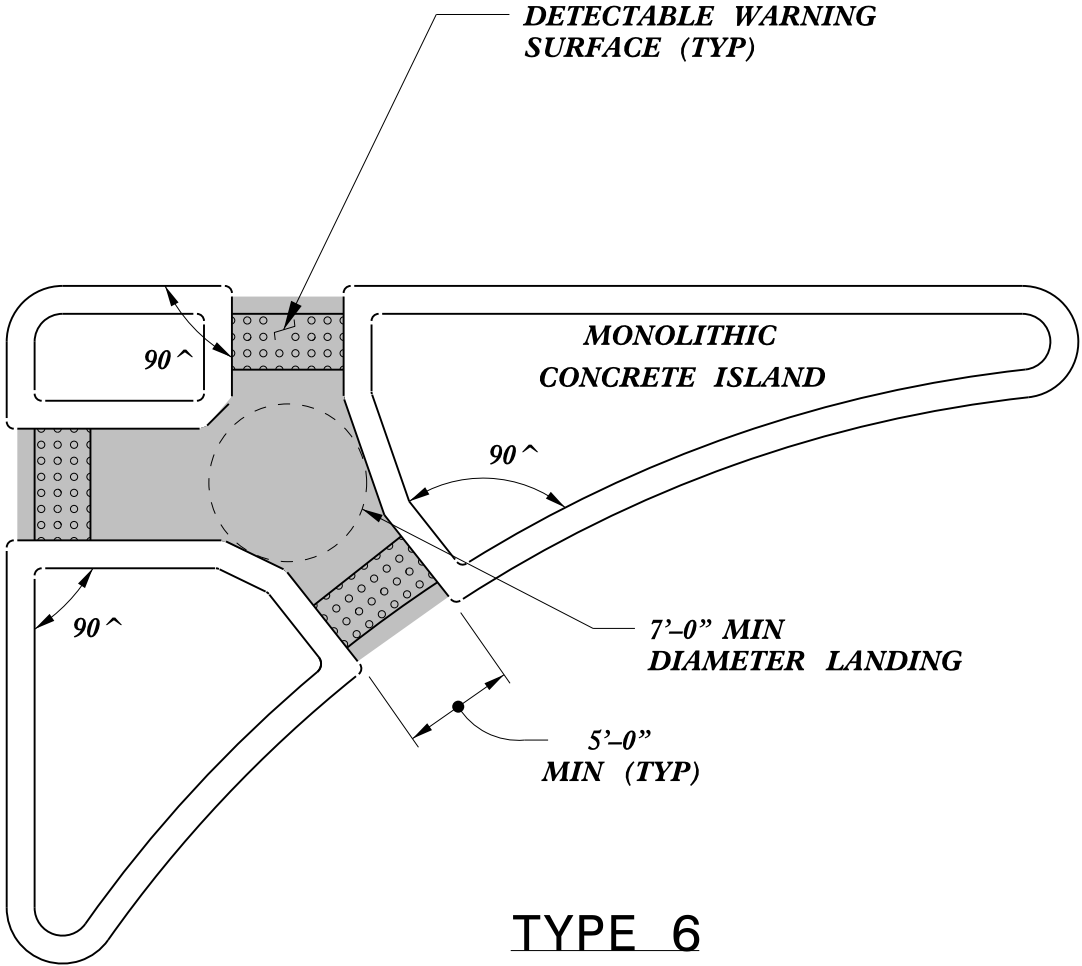
PAY LIMITS FOR 1, 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)



TYPE 7
MEDIAN ISLAND
WITH CUT THROUGH



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS



TYPE 6
TRIANGULAR ISLAND
WITH CUT THROUGH

TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

5/18/2018



DocuSigned by:
J. S. Howerton
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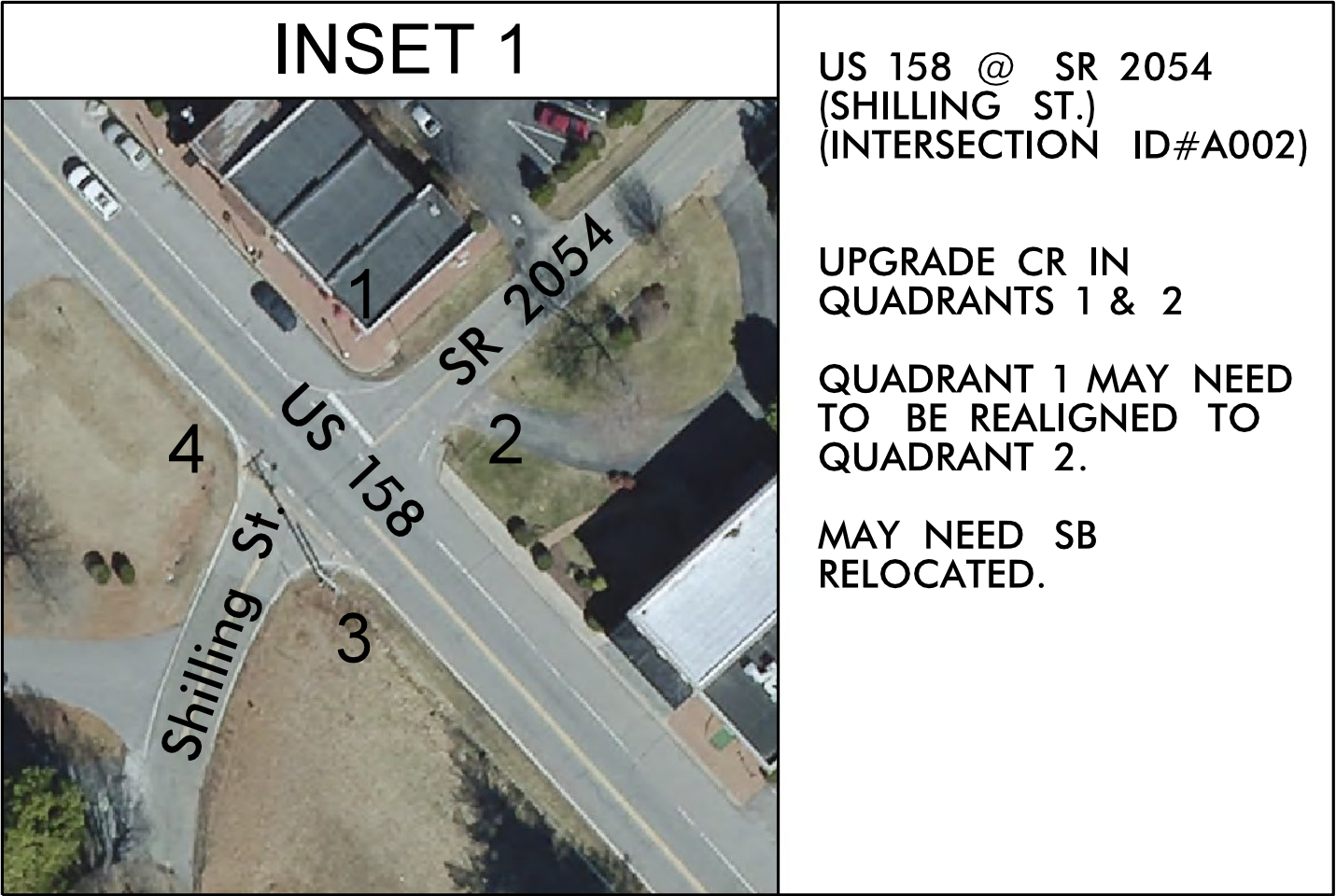
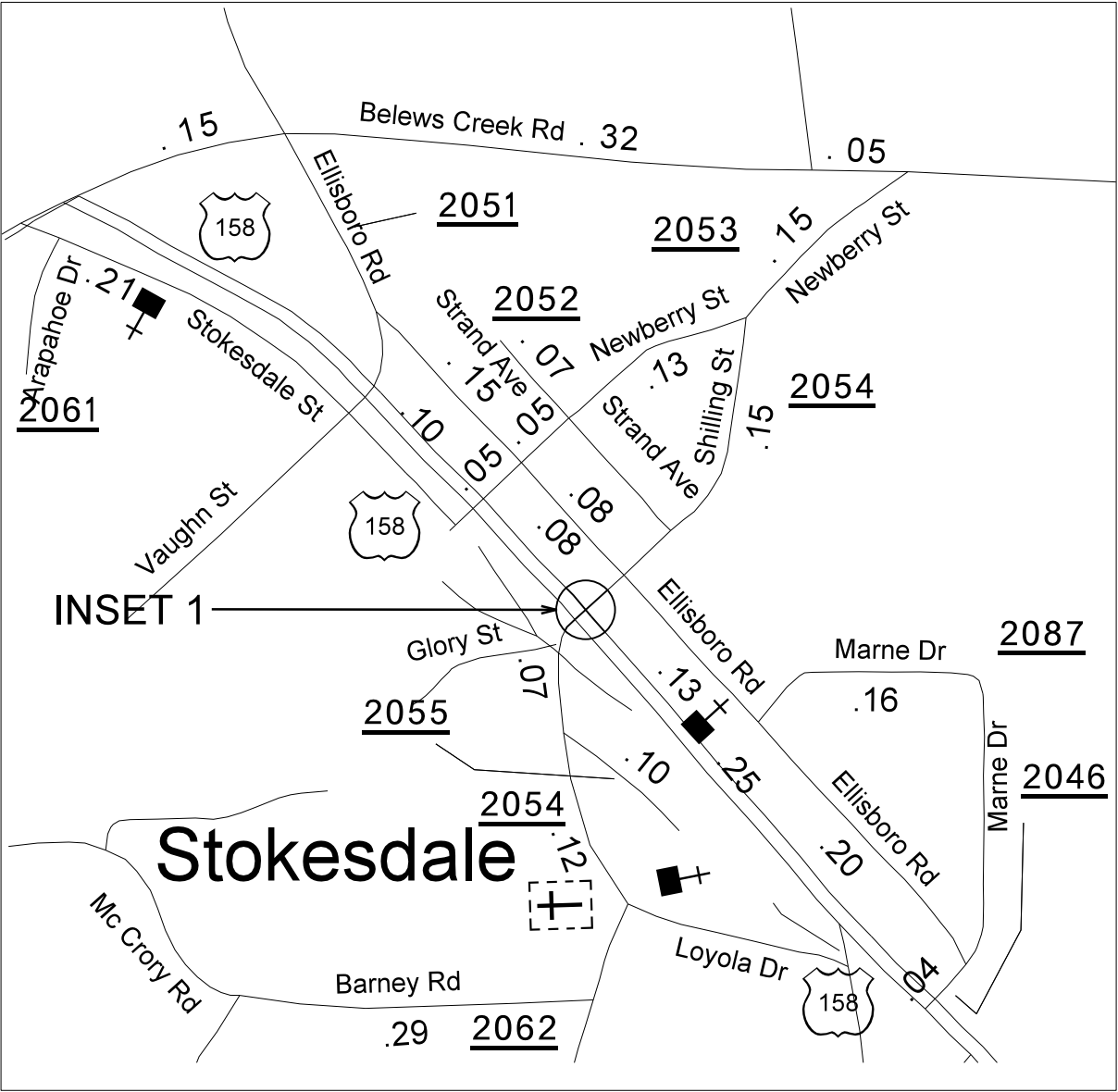
CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-6950 FAX 919-250-4119	
CURB RAMPS	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn	

																														PROJECT NO. R-5787C 44917.3.4		SHEET NO. 3A	
SUMMARY OF QUANTITIES																																	
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	GENERIC GRADING ITEM (REMOVE EXISTING CONCRETE)	AC PLANT MIX (REPAIR)	2'-6" CURB & GUTTER	4" CONCRETE SIDEWALK	GENERIC PAVING ITEM (REMOVE BRICK PAVERS)	GENERIC PAVING ITEM (INSTALL TOWN STANDARD BRICK PAVERS)	RETROFITTING EXISTING WHEELCHAIR RAMPS	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 1)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 1 MOD.)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 1A)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 1B)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 2A)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 2A MOD)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 2B)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 3)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CURB RAMP, TYPE 3 MOD)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP, TYPE 6)	GENERIC PAVING ITEM - (REMOVE AND REPLACE CONCRETE CURB RAMP - TYPE 7)	4" X 90 M WHITE THERMO	8" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO 24"YIELD LINE (90 MILS)	8" LINE REMOVAL	TEMPORARY SILT FENCE	WATTLE	SEEDING & MULCHING	JUNCTION BOX (PULL BOX, OVERSIZED, HEAVY DUTY)		
					SY	TONS	LF	SY	SF	SF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	LF	LF	LF
R-5787CB	Guilford	12	US 220 (BATTLEGROUND AVE.)	AT GREEN VALLEY RD.																										12			
44917.3.4				QUADRANT 1														1															
				QUADRANT 2														1														1.00	
TOTAL FOR MAP NO. 12																		2												12	0.00	1	
R-5787CB	Guilford	13	S. ELM-EUGENE ST.	AT I-40W/85S/US-70 OFF RAMP																									24	12	0.02		
44917.3.4				QUADRANT 1			28							1																			
				QUADRANT 2									1																				
				QUADRANT 3								1																					
				QUADRANT 4									1																				
				QUADRANT 5																		2											
				QUADRANT 6																		2											
TOTAL FOR INSET NO. 13							28					1	1	2								4							24	12	0.02		
R-5787CB	Guilford	14	NC 61 (CHURCH ST.)	AT BOONWOOD DR.																								24	12				
44917.3.4				QUADRANT 1								1																	24	12			
				QUADRANT 2														1															
TOTAL FOR INSET NO. 14												1							1										24	12	0.02		
R-5787CB	Guilford	15	NC 61 (CHURCH ST.)	AT COBB ST.																								24	12	0.02			
44917.3.4				QUADRANT 2																1													
				QUADRANT 3																													
				QUADRANT 4									1																				
TOTAL FOR INSET NO. 15													1					1	1										24	12	0.02		
R-5787CB	Guilford	16	NC 61 (CHURCH ST.)	AT E. JOYNER ST																								24	12	0.02			
44917.3.4				QUADRANT 1														1		1									24	12	0.02		
				QUADRANT 2														1															
				QUADRANT 3														1															
				QUADRANT 4														1															
TOTAL FOR INSET NO. 16																		3	1		1								24	12	0.02		
R-5787CB	Guilford	17	NC 61 (CHURCH ST.)	AT N. WHARTON AVE.																					75		150	24	12				
44917.3.4				QUADRANT 1																1													
				QUADRANT 2										1																			
				QUADRANT 3	5																												
TOTAL FOR INSET NO. 17					5									1							1				75		150	24	12	0.02			
R-5787CB	Guilford	18	NC 61 (CHURCH ST.)	AT LITTLE AVE/EUGENE ST.																								24	12	0.02			
44917.3.4				QUADRANT 1																1													
				QUADRANT 2												1																	
				QUADRANT 3													1																
				QUADRANT 4												1																	
TOTAL FOR INSET NO. 18																2	1				1								24	12	0.02		
R-5787CB	Guilford	19	NC 61 (N. WHARTON AVE.)	AT NC 100 (W. MAIN ST.)																										12			
44917.3.4				QUADRANT 1								1																					
				QUADRANT 4							1																						
TOTAL FOR INSET NO. 19											1	1																			12	0.00	
R-5787CB	Guilford	20	NC 61 (WHITSETT AVE.)	AT NC 100 (W. MAIN ST.)																									24	12	0.02		
44917.3.4				QUADRANT 3								1																					
				QUADRANT 4										1																			
TOTAL FOR INSET NO. 20												1	1																24	12	0.02		
R-5787CB	Guilford	21	NC 100/NC 61 (WHITSETT AVE.)	AT MADKINS ST																									24	12	0.02		
44917.3.4				QUADRANT 3								1																					
				QUADRANT 4									1																				
TOTAL FOR INSET NO. 21												2																	24	12	0.02		

2018 CURB RAMP CONTRACT – GUILFORD COUNTY

R-5787CB

PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	4
	44917.3.4



PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	5

44917.3.4



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 \$\$\$ENDNAME\$\$\$

2018 CURB RAMP CONTRACT – GUILFORD COUNTY
R-5787CB

PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	6
	44917.3.4

INSET 2



SR 1971 (SOUTHWEST SCHOOL RD.) @ SOUTHWEST GUILFORD HIGH SCHOOL (BUS ENTRANCE)

UPGRADE CR IN QUADRANTS 1 & 4

REMOVE AND REPLACE 15' OF SIDEWALK IN Q1.

ADD EDGE LINES, GORELINES, YIELD TRIANGLES (SHARK TEETH) AND HIGH VIS. PED. CROSSING ACCORDING TO STANDARDS.

INSET 3



SR 1971 (SOUTHWEST SCHOOL RD.) @ SOUTHWEST GUILFORD MIDDLE SCHOOL (BUS ENTRANCE)

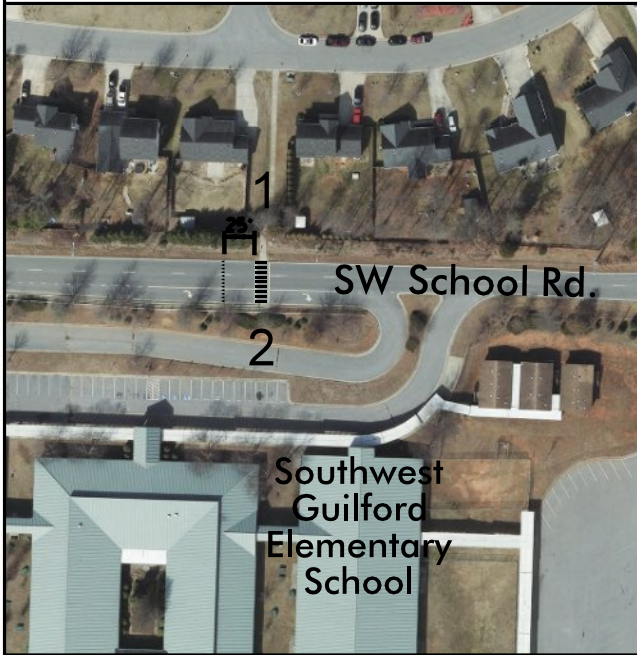
UPGRADE CR(S) IN QUADRANTS 1 & 4

Q1 & Q4 – REMOVE AND REPLACE 15' OF SIDEWALK, IN EACH QUADRANT.

RELIGN SIDEWALK AT Q4 TO MEET SIDEWALK AT Q1.

ADD EDGE LINE, GORE LINES, YIELD TRIANGLES (SHARK TEETH) AND HIGH VIS PED. CROSSING, ACCORDING TO STANDARDS.

INSET 4



SR 1971 (SOUTHWEST SCHOOL RD.) @ SOUTHWEST GUILFORD ELEMENTARY SCHOOL (DRIVEWAY # 1)

UPGRADE CR(S) IN QUADRANTS 1 & 2

REMOVE AND REPLACE 10' OF SIDEWALK IN Q1.

ADD HIGH VIS PED. CROSSING AND YIELD TRIANGLES (SHARK TEETH), ACCORDING TO STANDARDS.



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PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	7

44917.3.4



1

2

3

4

NC 68 (Westchester Dr.)

Westchester Commons

UPGRADE CR(S) IN QUADRANTS 1 & 2

PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	8
44917.3.4	



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An aerial photograph of a road intersection. The main road, labeled 'US 220 (Battleground Ave.)', runs diagonally from the top-left to the bottom-right. A side road, labeled 'N. Elam Ave.', branches off to the left from the main road. Five numbered locations are marked: '1' is in a parking lot to the north of the intersection; '2' is on the east side of the intersection; '3' is on the south side of the intersection; '4' is on the west side of the intersection; and '5' is at the intersection itself. Various vehicles and buildings are visible in the surrounding area.

MOVE EXISTING
MEDIAN CUT
THROUGH (TYPE 7) BY
3', TOWARDS US-220.
ALIGN RAMPS IN Q3
& Q4 TO MEET Q5,
AS ILLUSTRATED.

An aerial photograph of a street intersection. The main road is labeled 'US 220' and runs diagonally from the top left to the bottom right. A side road, labeled 'Markland Dr. (Battleground Ave.)', runs diagonally from the top right to the bottom left, intersecting US 220. Four locations are marked with numbers: '1' is at the intersection; '2' is on Markland Dr. just below the intersection; '3' is further down US 220; and '4' is on the left side of US 220, near a large tree. A black line connects location 4 to location 3.

ALIGN RAMP IN Q1 TO
MEET RAMP IN Q4.

An aerial photograph of a road intersection. The main road is labeled 'US 220' and runs diagonally from the top left to the bottom right. A side road, labeled 'Fernwood Dr. (Battleground Ave.)', branches off to the left from US 220. Four locations are marked with numbers: '1' is on the right side of US 220, north of the intersection; '2' is on the right side of the side road, south of the intersection; '3' is on the left side of US 220, south of the intersection; and '4' is on the left side of US 220, north of the intersection. The area is mostly bare ground with some trees and a few buildings.

ALIGN THE RAMPS, AS ILLUSTRATED, IN THE DRAWING.

ALIGN THE RAMPS, AS ILLUSTRATED, IN THE DRAWING.

R-5787CB

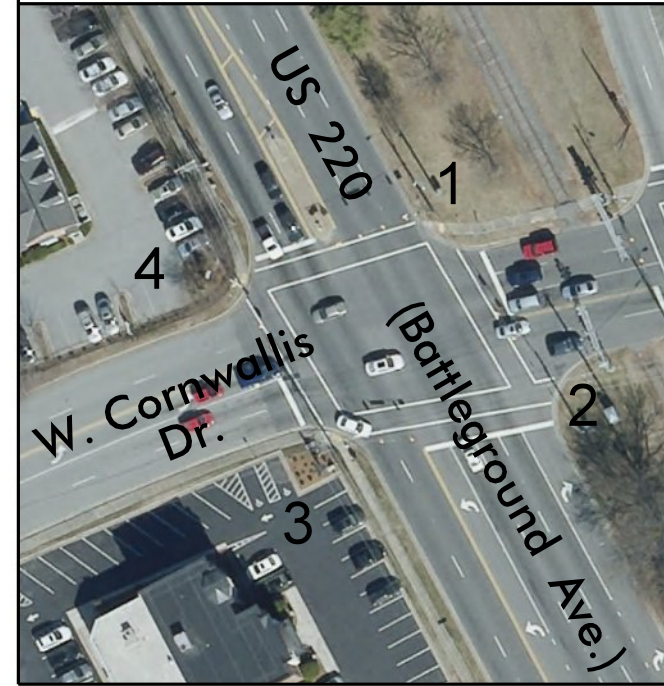
INSET 10



US 220
(BATTLEGROUND AVE.)
@ ALBRIGHT DR.
(INTERSECTION
ID#B042)

UPGRADE CR(S) IN QUADRANTS 3 & 4

INSET 11



US 220
(BATTLEGROUND AVE.)
@ CORNWALLIS DR.
(INTERSECTION ID#B041)

UPGRADE CR IN QUADRANTS 1 & 3

-ASK TRAFFIC TO
REMOVE CROSSING
FROM Q1-Q2-Q3)

–ASK COG, TO
RELOCATE FH IN
SIDEWALK

INSET 12



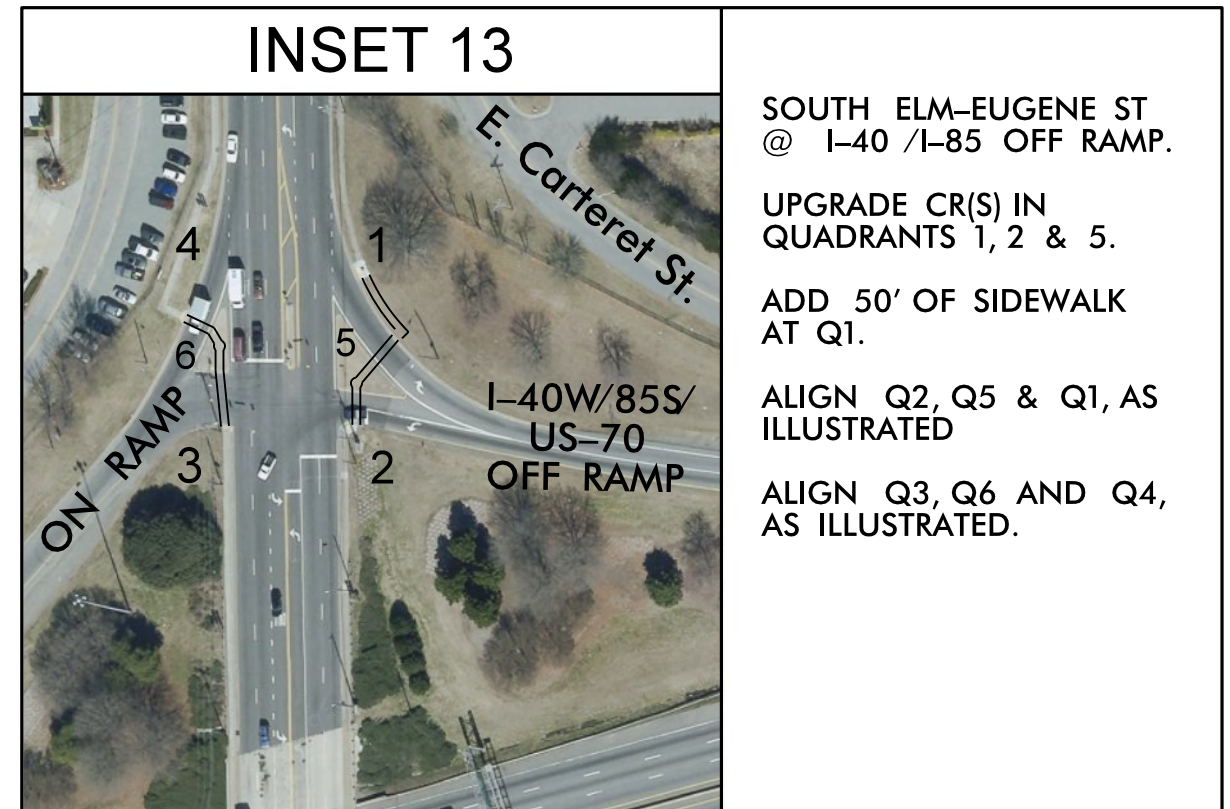
US 220
(BATTLEGROUND AVE.)
@ GREEN VALLEY RD.
(INTERSECTION
ID#B038)

UPGRADE CR(S) IN
QUADRANT 1 & 2

Q2 – OVERSIZED JB
REQUIRED

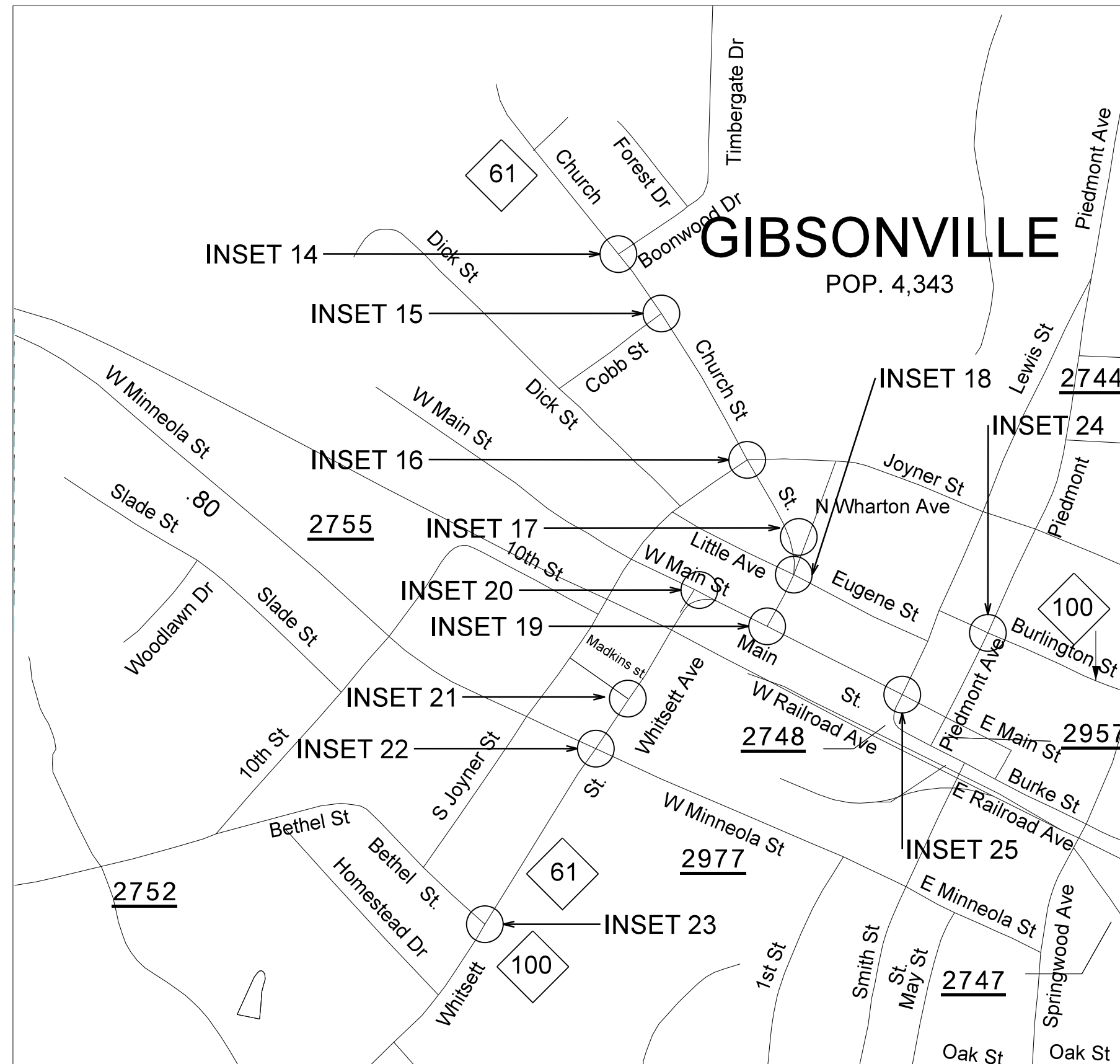
PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	11

44917.3.4



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 \$\$\$;GERRARD\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	12
R-5787CB	44917.3.4



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2018 CURB RAMP CONTRACT – GUILFORD COUNTY R-5787CB

PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	13
	44917.3.4

INSET 14



NC 61
(CHURCH ST.)
@ BOONWOOD DR.
(INTERSECTION
ID#B002)

UPGRADE CR(S) IN
QUADRANTS 1 & 2

(ALIGN WARNING
PAD WITH
DIRECTIONAL RAMP AT
Q1)

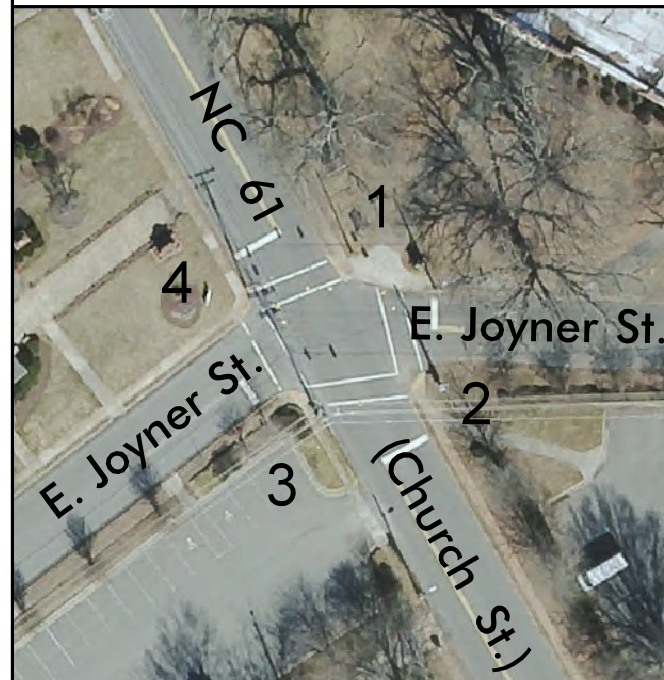
INSET 15



NC 61
(CHURCH ST.)
@ COBB ST.
(INTERSECTION
ID#B003)

UPGRADE CR(S) IN
QUADRANTS 2, 3 & 4

INSET 16



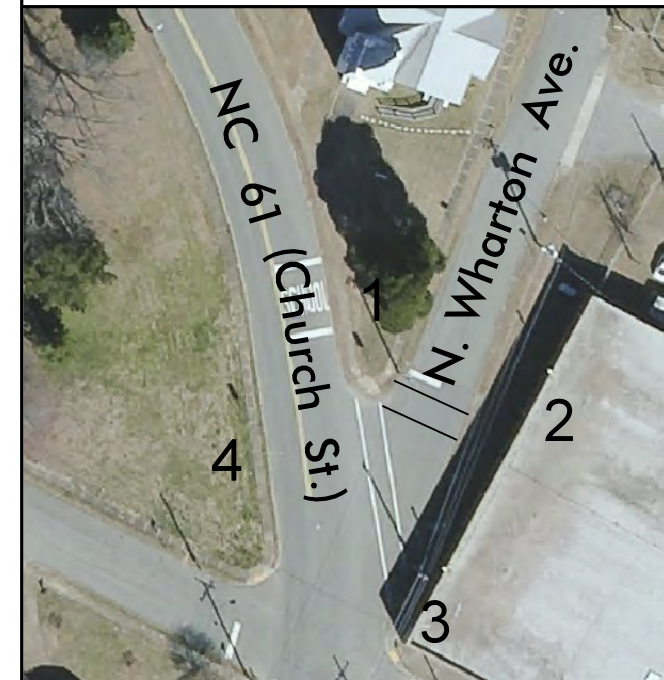
NC 61
(CHURCH ST.)
@ E. JOYNER ST.
(INTERSECTION
ID#B004)

UPGRADE CR(S) IN
QUADRANTS 1, 2, 3 &
4

Q1 – RAMP 1– TYPE 3
MOD FACING Q4
RAMP 2– TYPE 2B
FACING Q2

Q3 & Q4 –MAKE
RAMPS SYMMETRICAL
TO ALLOW ACCESS
FROM BOTH SIDES

INSET 17



NC 61
(CHURCH ST.)
@ N. WHARTON AVE.
(INTERSECTION
ID#B005)

UPGRADE CR(S) IN
QUADRANT 1, 2 & 3

ALIGN RAMP IN Q1
TO MEET RAMP IN
Q2.

REMOVE EXISTING PED
STRIPING AND
PROVIDE NEW PED
STRIPING FROM Q1
TO Q2, AS SHOWN.



R-5787CB

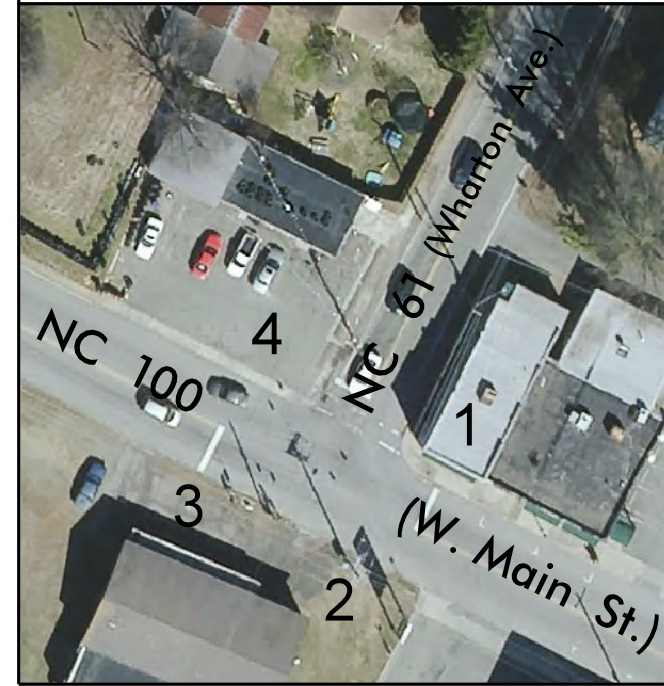
INSET 18



NC 61
(CHURCH ST.)
@ LITTLE AVE.TO
EUGENE ST.
(INTERSECTION
ID#B006)

UPGRADE CR(S) IN
QUADRANTS 1
THROUGH 4.

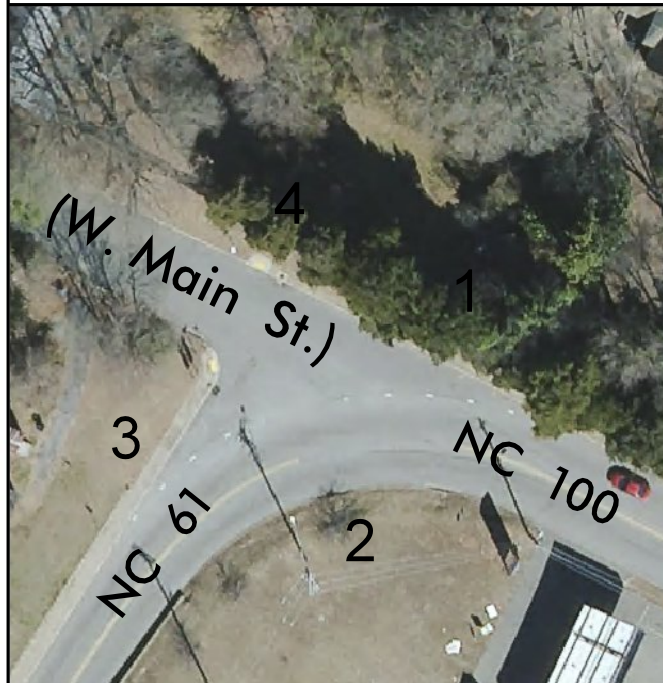
INSET 19



NC 61
(N. WHARTON AVE.)
@ NC 100
(W. MAIN ST.)
(INTERSECTION ID#B007)

UPGRADE CR(S) IN
QUADRANTS 1 & 4

INSET 20



NC 61 (WHITSETT AVE.)
@ NC 100
(W. MAIN ST.)
(INTERSECTION
ID#B007A)

UPGRADE CR IN QUADRANTS 3 & 4

INSET 21



NC 100
(Whitsett Ave.)
@ Madkins St.
(Intersection ID#A010)

UPGRADE CR(S) IN
QUADRANTS 3 & 4



PROJECT REFERENCE NO.	SHEET NO.
R-5787CB	15

44917.3.4

An aerial photograph of a residential intersection. The intersection is between a road labeled 'NC 100' (running diagonally from bottom-left to top-right) and a road labeled 'W. Minneola St.' (running diagonally from top-left to bottom-right). A third road, labeled '(Whitsett Ave.)', branches off to the right from W. Minneola St. Four locations are marked with black numbers: '1' is on Whitsett Ave. near a house; '2' is on the south side of W. Minneola St. near a large house; '3' is on the north side of NC 100 near a house; and '4' is on the north side of NC 100 near a large house. The area includes various houses, trees, and a grassy field.

UPGRADE CR(S) IN QUADRANTS 2, 3 & 4

UPGRADE CR(S) IN
QUADRANTS 1 – 4

An aerial photograph of a street intersection. The vertical street is labeled 'SR 2957' and the horizontal street is labeled 'NC 100'. The intersection is marked with a yellow 'X' and the number '2'. To the right of the intersection, along NC 100, is a large commercial building labeled '1'. The street continuing to the right is labeled '(Piedmont Ave.)' and '(Burlington Ave.)'. Other buildings and parked cars are visible in the surrounding area.

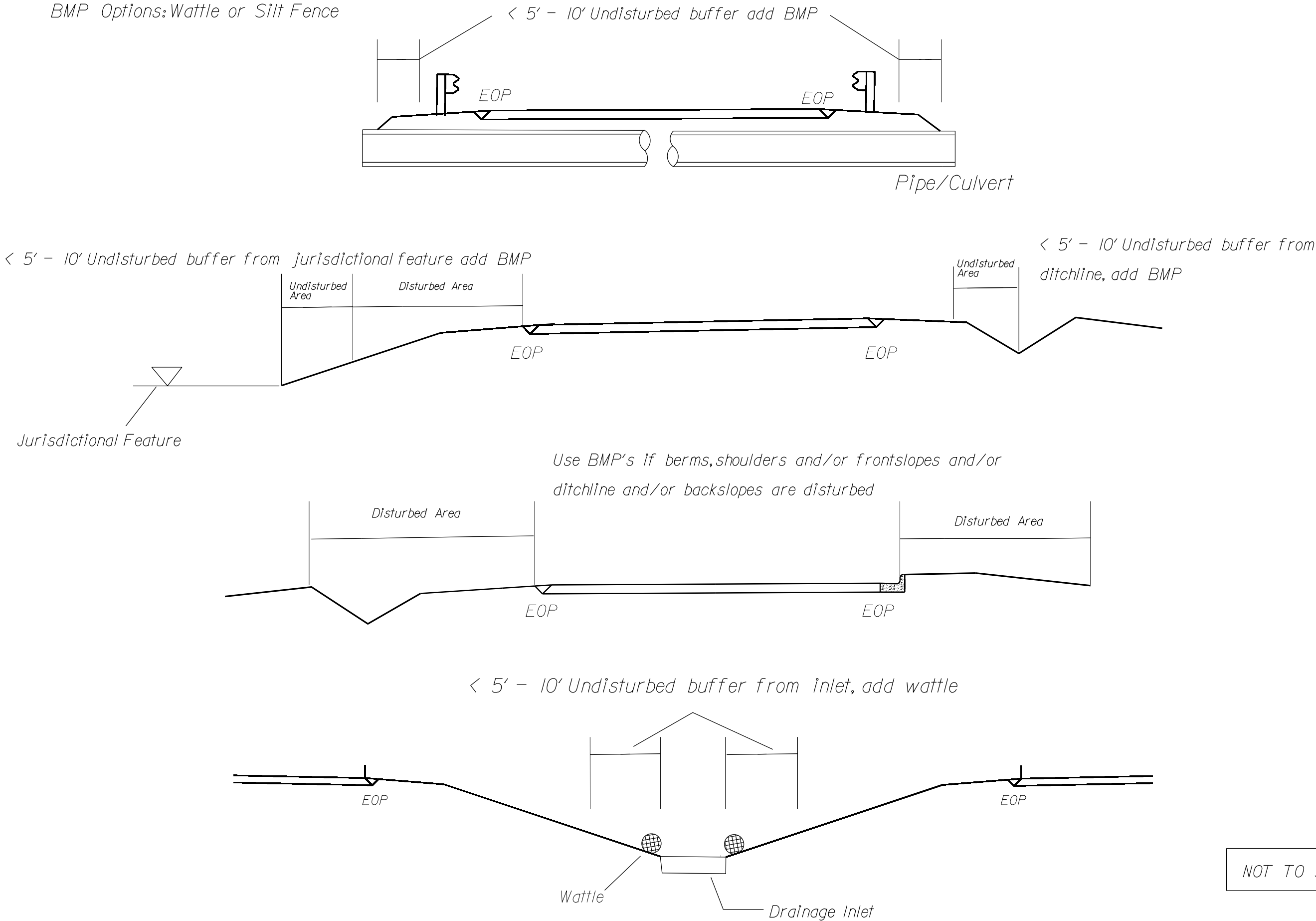
UPGRADE CR IN QUADRANT 3

UPGRADE CR(S) IN
QUADRANTS 1, 4 & 5

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

EROSION CONTROL DETAIL



NOT TO SCALE

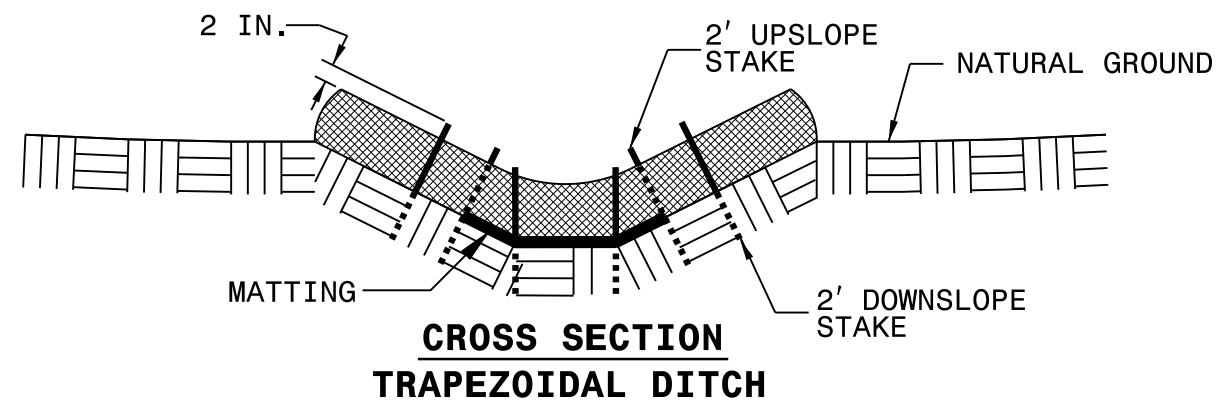
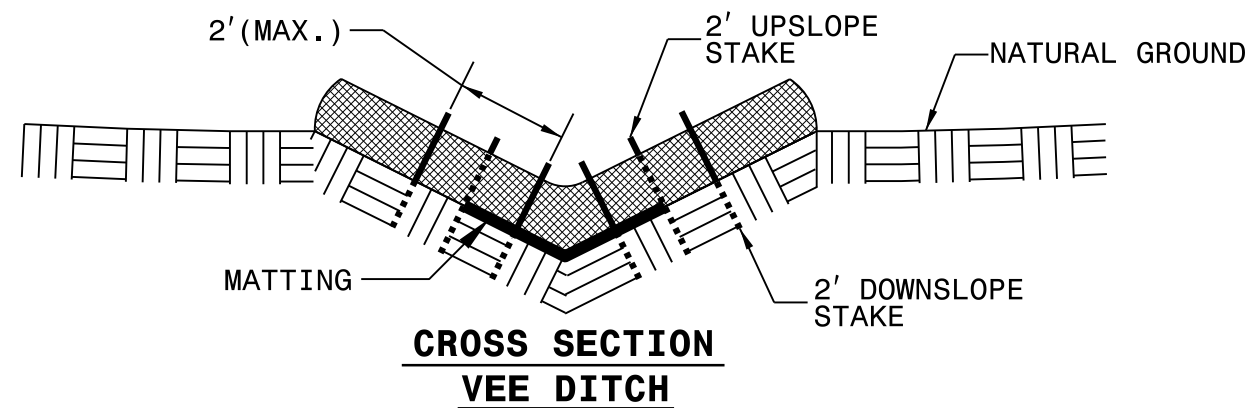
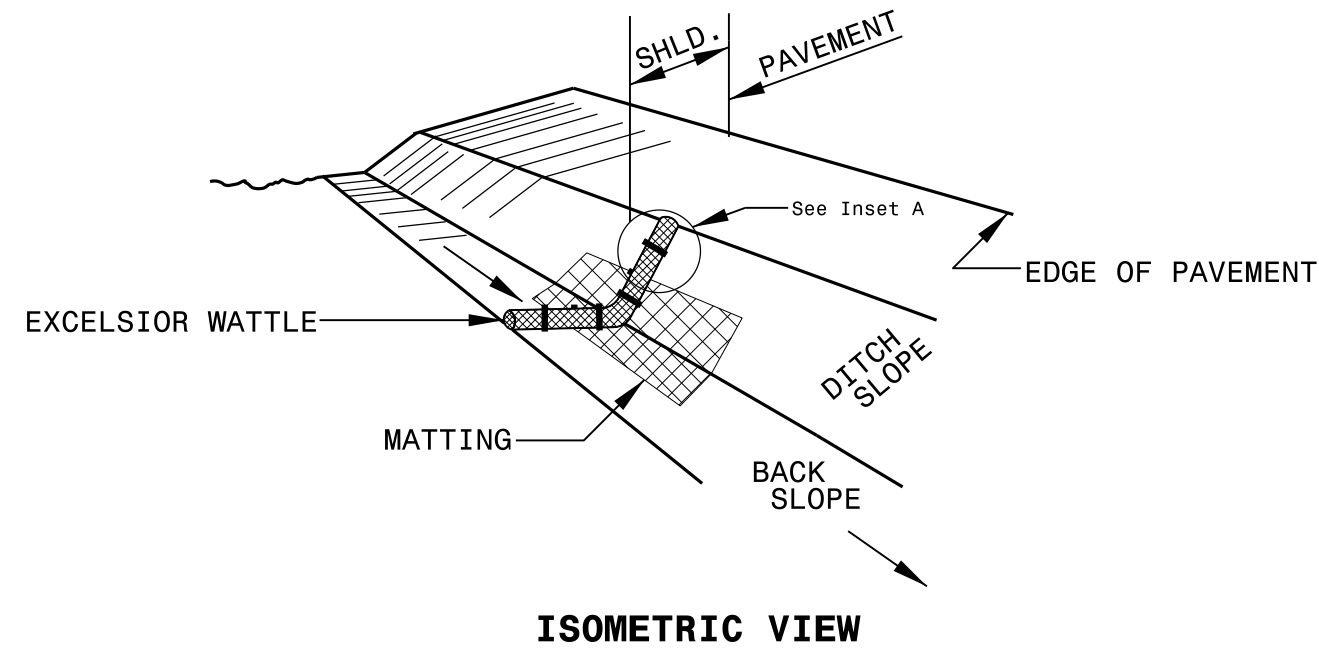
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10’ OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50’ IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

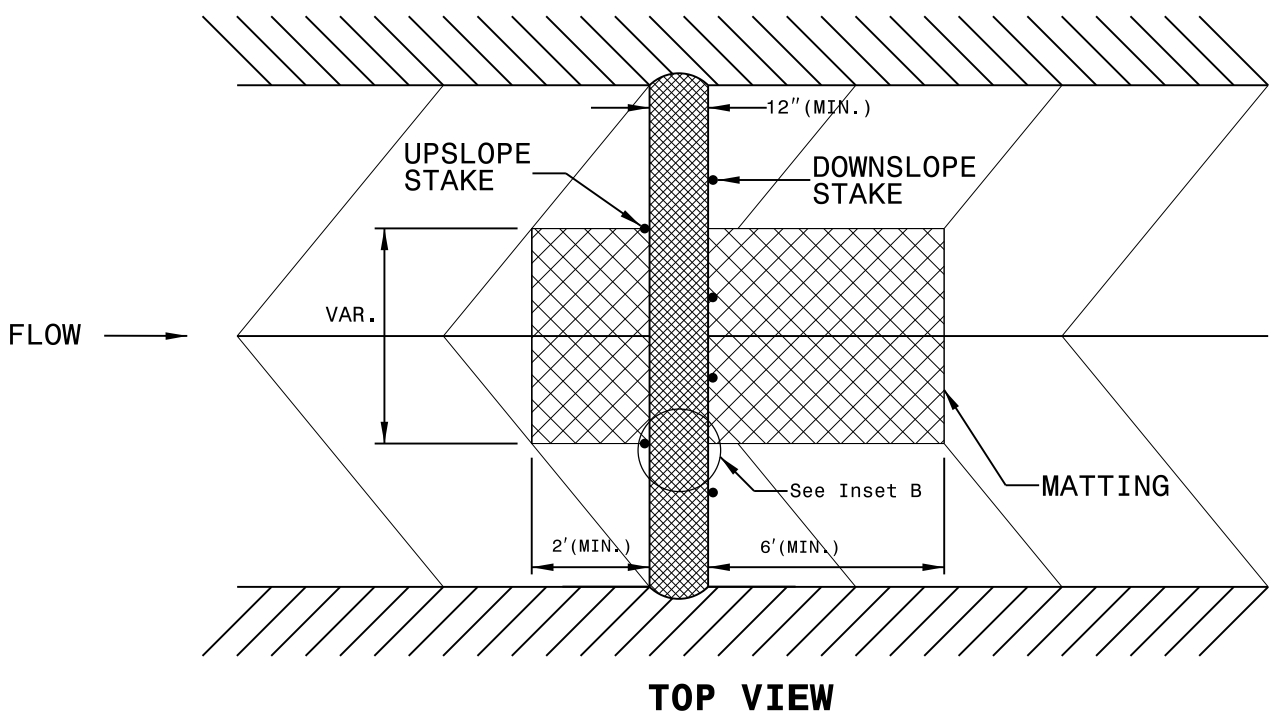
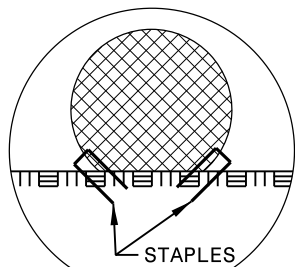
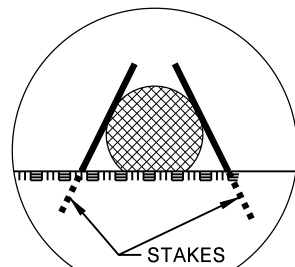
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

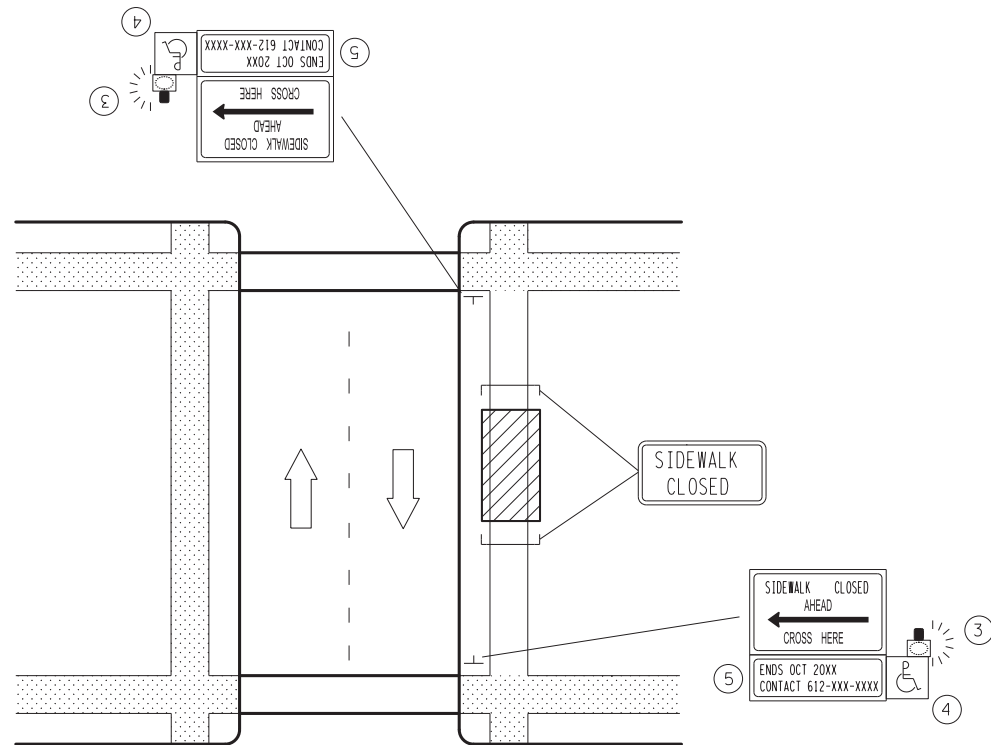
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

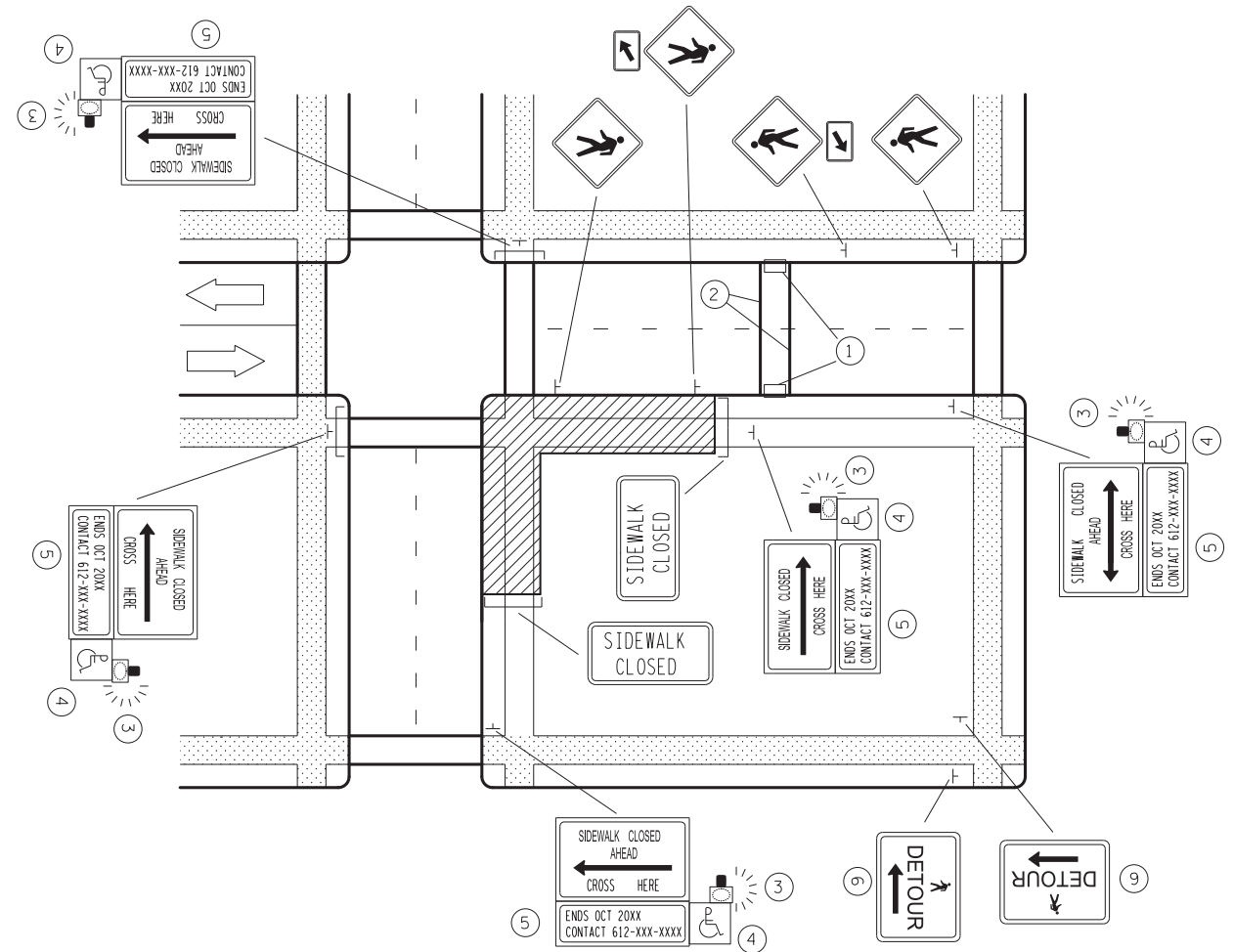
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.





OTHER SIDE OF STREET DETOUR
(FOR MID-BLOCK CLOSURE)



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS
(FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK)

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE detours, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN A SIGN OR BARRICADE IS ORIENTED SUCH THAT VISIBILITY TO TRAFFIC (BIKES, PEDESTRIANS) IS REDUCED ENOUGH TO CAUSE HAZARD, DELINEATE THE SIGN/BARRICADE WITH APPROPRIATE DEVICES.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.

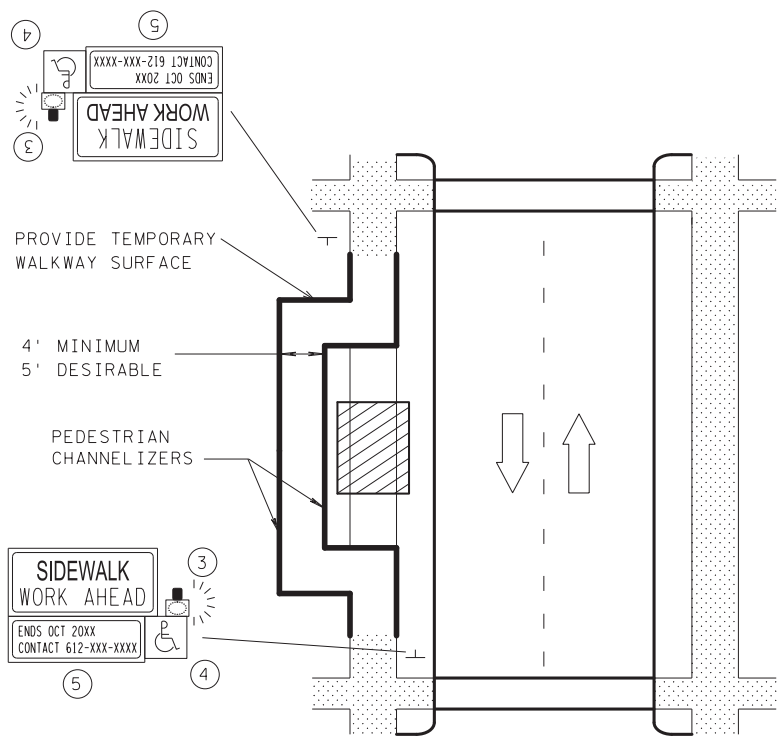
SPECIFIC NOTES

- ① TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.
- ② TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- ③ AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHOULD BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.
- ④ THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHOULD BE POSTED AND AN ALTERNATE ROUTE SHOULD BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.
- ⑤ TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHOULD INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.
- ⑥ PEDESTRIAN DETOUR TRAILBLAZING SIGNS SHOULD BE USED IF THE PEDESTRIAN DETOUR IS LOCATED SOMEPLACE OTHER THAN ACROSS THE STREET FROM THE SIDEWALK CLOSURE.

LEGEND

	SIGN		DIRECTION OF TRAFFIC
	EXISTING PEDESTRIAN SURFACE		TRAFFIC CONTROL DEVICE
	WORK AREA		
	PEDESTRIAN CHANNELIZATION DEVICE		
	SIDEWALK BARRICADE		

TRAFFIC CONTROL
ALTERNATE PEDESTRIAN ROUTE (APR) DETOUR

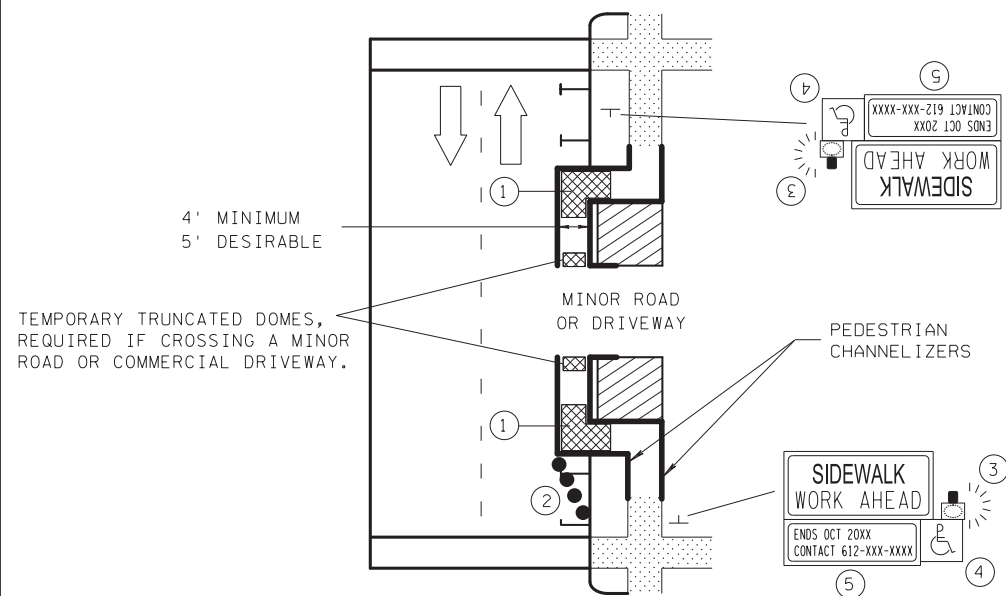


BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY

BYPASS TYPE A

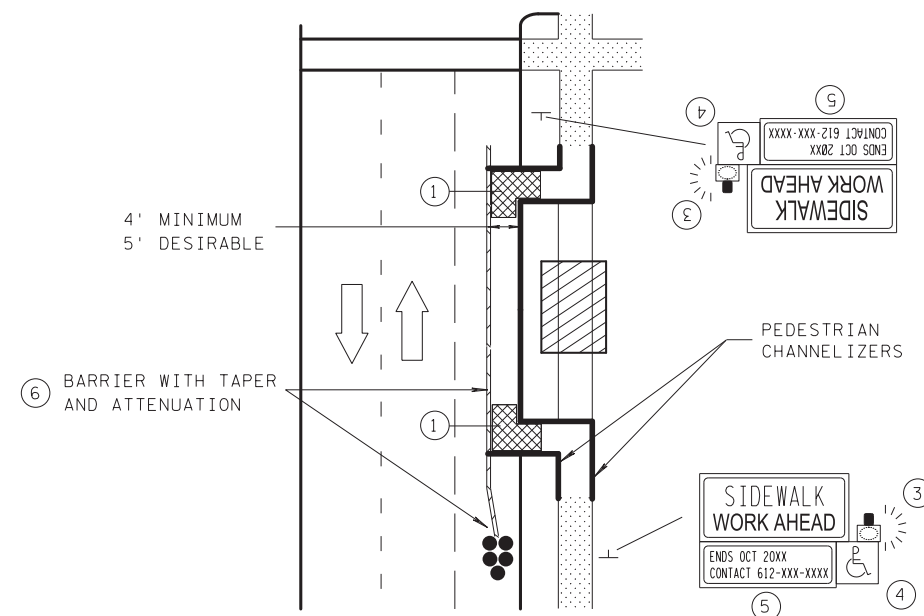
PREFERRED METHOD TO BE USED IN CONJUNCTION WITH 2012 NCDOT STANDAND DRAWINGS

NOTE: MAY ONLY BE USED ON ROADWAY WITH POSTED
SPEED OF 45 MPH OR LESS.



SIDEWALK BYPASS USING PARKING OR
SHOULDER ON LOW SPEED ROADWAY

BYPASS TYPE B



SIDEWALK BYPASS USING
SHOULDER OR PARKING LANE
HIGH SPEED ROADWAY

BYPASS TYPE C

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN A SIGN OR BARRICADE IS ORIENTED SUCH THAT VISIBILITY TO TRAFFIC (BIKES, PEDESTRIANS) IS REDUCED ENOUGH TO CAUSE HAZARD, DELINEATE THE SIGN/BARRICADE WITH APPROPRIATE DEVICES.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.

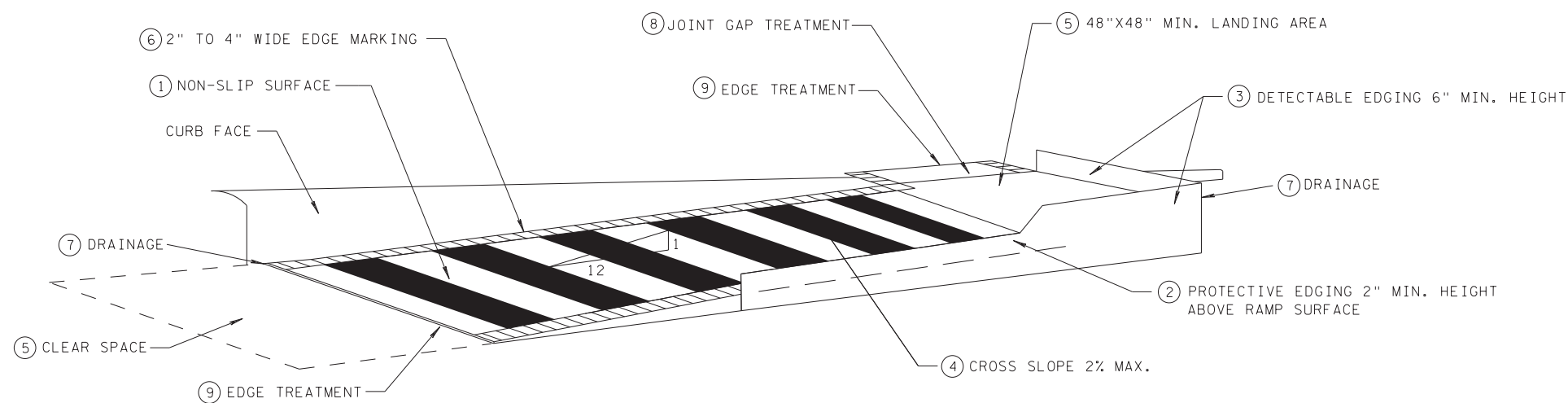
SPECIFIC NOTES

- ① TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.
- ② 5 DEVICE TAPER 25 FEET LONG, RECOMMENDED WHEN THE CLOSED AREA WAS USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ③ AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHOULD BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.
- ④ THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHOULD BE POSTED AND AN ALTERNATE ROUTE SHOULD BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.
- ⑤ TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHOULD INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.
- ⑥ SEE MN MUTCD FOR GUIDANCE ON PLACEMENT AND USAGE OF BARRIER.

LEGEND

	SIGN		DIRECTION OF TRAFFIC
	EXISTING PEDESTRIAN SURFACE		TRAFFIC CONTROL DEVICE
	WORK AREA		SIDEWALK BARRICADE
	PEDESTRIAN CHANNELIZATION DEVICE		
	BARRIER		

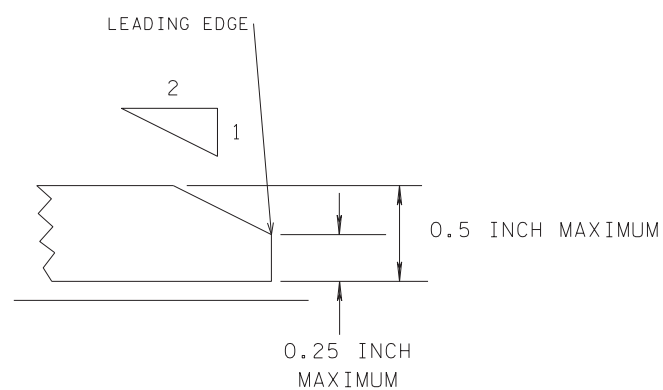
TRAFFIC CONTROL ALTERNATE PEDESTRIAN ROUTE (APR) BYPASS



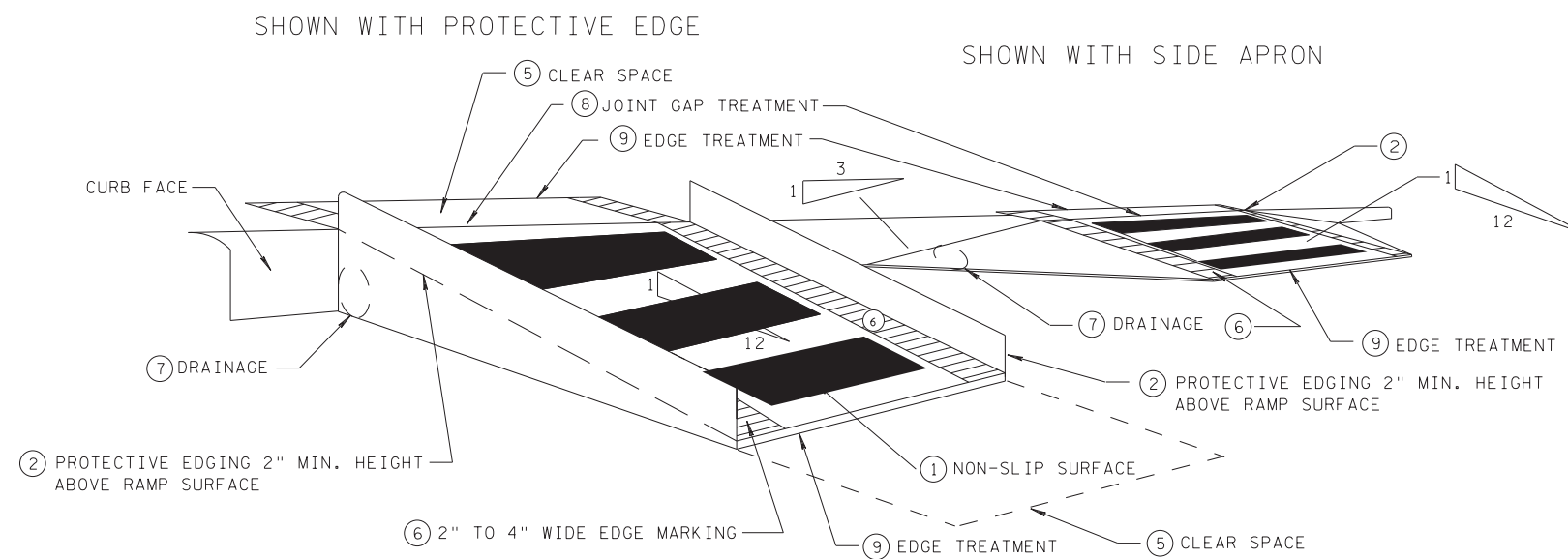
TEMPORARY CURB RAMP
PARALLEL TO CURB

SPECIFIC NOTES

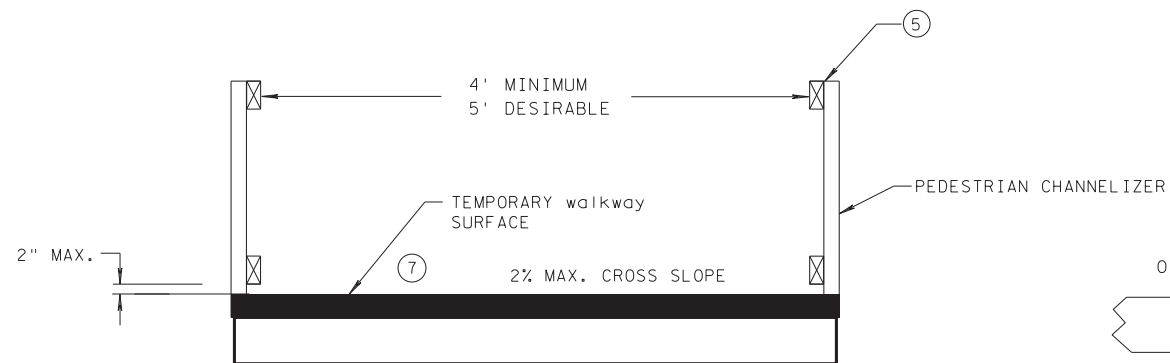
- ① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- ② PROTECTIVE EDGING WITH A ~~2"~~ 2" MIN. HEIGHT SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
- ⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- ⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
- ⑦ WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
- ⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHOULD BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2" HEIGHT.



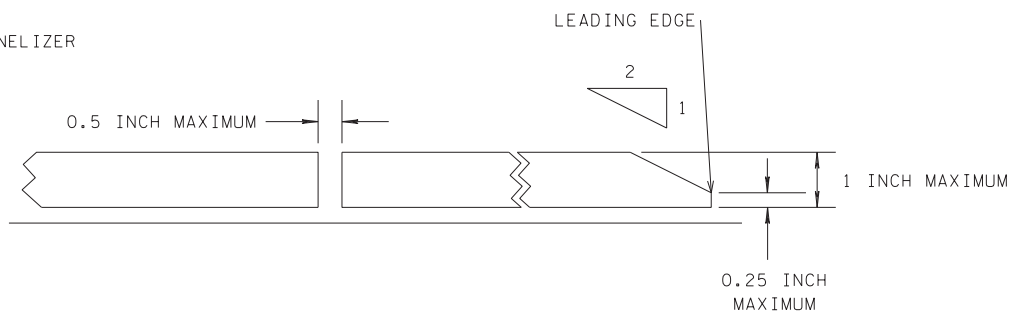
⑨ EDGE TREATMENT



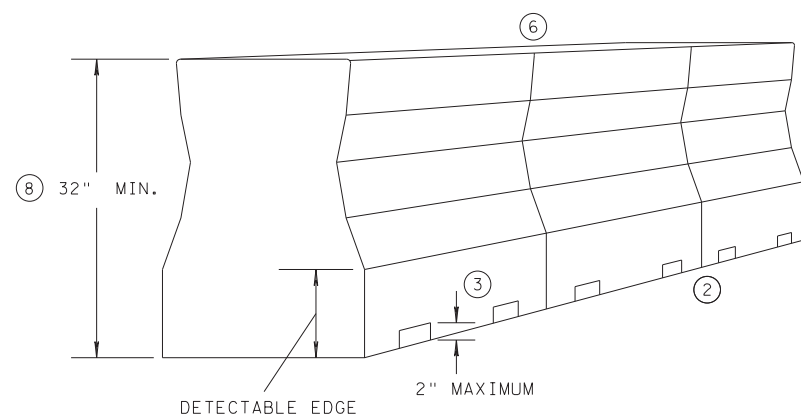
TEMPORARY CURB RAMP
PERPENDICULAR TO CURB



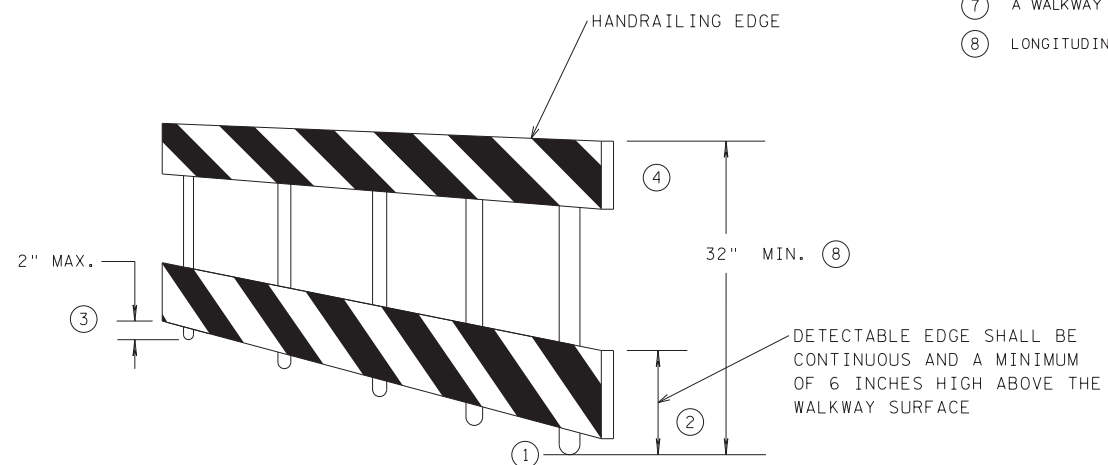
TEMPORARY PEDESTRIAN ACCESS



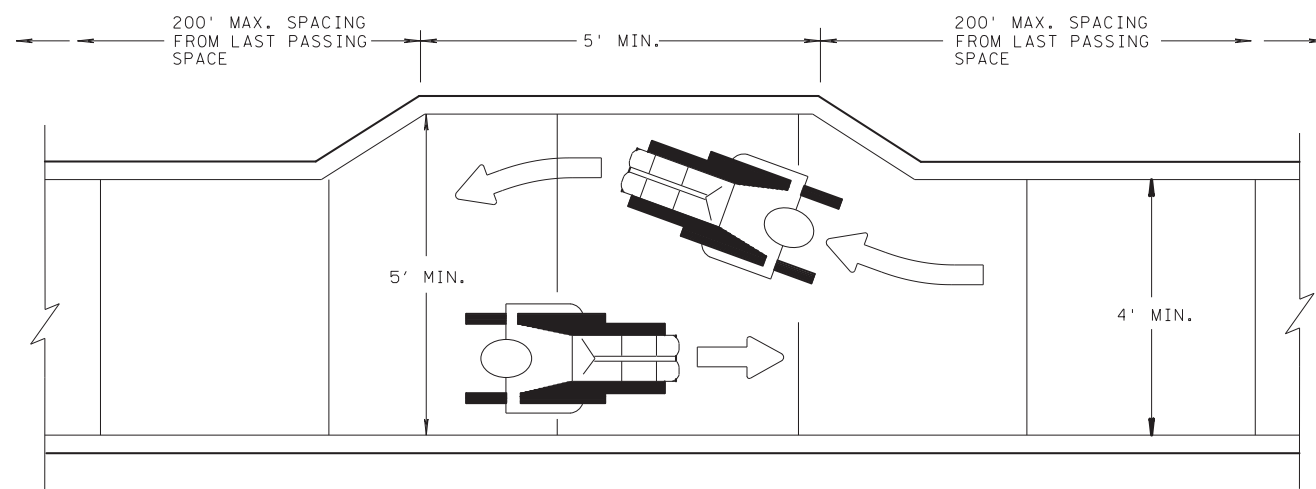
TEMPORARY WALKWAY SURFACE



PEDESTRIAN CHANNELIZER USING A BARRIER
(MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER
(MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL

GENERAL NOTES

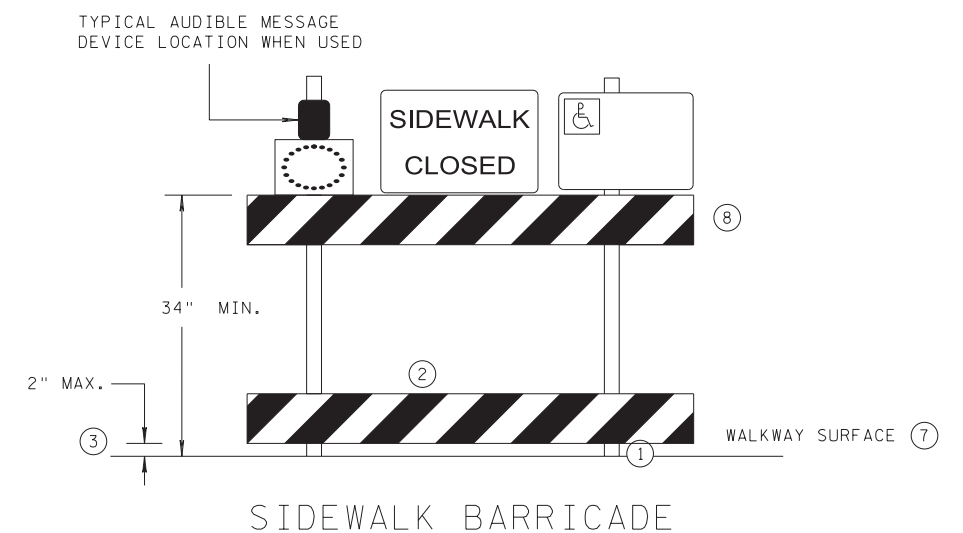
RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.

ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIERS APPLICATION.

BARRICADES SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE.

SPECIFIC NOTES

- ① ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.
- ② DETECTABLE EDGES SHALL BE CONTINUOUS AND 6 INCHES MIN. HIGH ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.
- ③ DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.
- ④ WHEN HAND GUIDANCE IS REQUIRED, THE TOP RAIL OR TOP SURFACE SHALL:
 - BE IN A VERTICAL PLANE PERPENDICULAR TO THE WALKWAY ABOVE THE DETECTABLE EDGE,
 - BE CONTINUOUS AT A HEIGHT OF 34 TO 38 INCHES ABOVE THE WALKWAY SURFACE, AND
 - BE SUPPORTED WITH MINIMAL INTERFERENCE TO THE PEDESTRIAN'S HANDS OR FINGERS.
- ⑤ ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.
- ⑥ ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE CHANNELIZED PATH.
- ⑦ A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT.
- ⑧ LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES HIGH OR GREATER.



TPAR - WALKWAY DEVICES